

CHECKLIST TO DESIGNATE AREAS OF EVALUATION FOR REQUESTS FOR PROPOSAL (RFP)

MDOT PROJECT MANAGER Suzette Peplinski			JOB NUMBER (JN) 100611	CONTROL SECTION (CS) 84913
DESCRIPTION IF NO JN/CS ITS Control and Equipment Room design				
MDOT PROJECT MANAGER: Check all items to be included in RFP. WHITE = REQUIRED GRAY SHADING = OPTIONAL			CONSULTANT: Provide only checked items below in proposal.	
Check the appropriate Tier in the box below				
<input type="checkbox"/> TIER I (\$25,000-\$99,999)	<input checked="" type="checkbox"/> TIER II (\$100,000-\$250,000)	<input type="checkbox"/> TIER III (>\$250,000)		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Understanding of Service	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Innovations</i>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Safety Program</i>	
N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Organization Chart	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Qualifications of Team	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Past Performance	
Not required as part of official RFP	Not required as part of official RFP	<input type="checkbox"/>	Quality Assurance/Quality Control	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Location: The percentage of work performed in Michigan will be used for all selections unless the project is for on-site inspection or survey activities, then location should be scored using the distance from the consultant office to the on-site inspection or survey activity.	
N/A	N/A	<input type="checkbox"/>	Presentation	
N/A	N/A	<input type="checkbox"/>	Technical Proposal (if Presentation is required)	
3 pages (MDOT forms not counted) (No Resumes)	7 pages (MDOT forms not counted)	19 pages (MDOT forms not counted)	Total maximum pages for RFP not including key personnel resumes	

REQUEST FOR PROPOSAL

The Michigan Department of Transportation (MDOT) is seeking professional services for the project contained in the attached scope of services.

If your firm is interested in providing services, please indicate your interest by submitting a Proposal, Proposal/Bid Sheet or Bid Sheet as indicated below. The documents must be submitted in accordance with the latest "Consultant/Vendor Selection Guidelines for Service Contracts" and "Guideline for Completing a Low Bid Sheet(s)", if a low bid is involved as part of the selection process. **Referenced Guidelines are available on MDOT's website under Doing Business > Vendor/Consultant Services > Vendor/Consultant Selections.**

RFP SPECIFIC INFORMATION

☒ BUREAU OF HIGHWAYS ☐ BUREAU OF TRANSPORTATION PLANNING ** ☐ OTHER

THE SERVICE WAS POSTED ON THE ANTICIPATED QUARTERLY REQUESTS FOR PROPOSALS

☐ NO ☒ YES DATED 4/1/08 THROUGH 6/30/08

<input checked="" type="checkbox"/> Prequalified Services – See page <u>1</u> of the attached Scope of Services for required Prequalification Classifications.	<input type="checkbox"/> Non-Prequalified Services - If selected, the vendor must make sure that current financial information, including labor rates, overhead computations, and financial statements, if overhead is not audited, is on file with MDOT's Office of Commission Audits. This information must be on file for the prime vendor and all sub vendors so that the contract will not be delayed.
---	--

☒ **Qualifications Based Selection** – Use Consultant/Vendor Selection Guidelines

For all Qualifications Based Selections, the section team will review the information submitted and will select the firm considered most qualified to perform the services based on the proposals. The selected vendor will be contacted to confirm capacity. Upon confirmation, that firm will be asked to prepare a priced proposal. Negotiations will be conducted with the firm selected.

****For RFP's that originate in Bureau of Transportation Planning only**, a priced proposal must be submitted at the same time as, but separate from, the proposal. Submit directly to the Contract Administrator/Selection Specialist, Bureau of Transportation Planning (see address list, page 2). The priced proposal must be submitted in a sealed envelope, clearly marked "**PRICE PROPOSAL.**" The vendor's name and return address **MUST** be on the front of the envelope. The priced proposal will only be opened for the highest scoring proposal. Unopened priced proposals will be returned to the unselected vendor(s). Failure to comply with this procedure may result in your priced proposal being opened erroneously by the mail room.

For a cost plus fixed fee contract, the selected vendor must have a cost accounting system to support a cost plus fixed fee contract. This type of system has a job-order cost accounting system for the recording and accumulation of costs incurred under its contracts. Each project is assigned a job number so that costs may be segregated and accumulated in the vendor's job-order accounting system.

☐ **Qualifications Review / Low Bid** - Use Consultant/Vendor Selection Guidelines. See Bid Sheet Instructions for additional information.

For Qualification Review/Low Bid selections, the selection team will review the proposals submitted and post the date of the bid opening on the MDOT website. The notification will be posted at least two business days prior to the bid opening. Only bids from vendors that meet proposal requirements will be opened. The vendor with the lowest bid will be selected. The selected vendor may be contacted to confirm capacity.

☐ **Best Value** - Use Consultant/Vendor Selection Guidelines. See Bid Sheet Instructions below for additional information. The bid amount is a component of the total proposal score, not the determining factor of the selection.

☐ **Low Bid** (no qualifications review required - no proposal required.) See Bid Sheet Instructions below for additional instructions.

BID SHEET INSTRUCTIONS

A bid sheet(s) must be submitted in accordance with the "Guideline for Completing a Low Bid Sheet(s)" (available on MDOT's website). The Bid Sheet(s) is located at the end of the Scope of Services. Submit bid sheet(s) separate from the proposal, to the address indicated below. The bid sheet(s) must be submitted in a sealed manila envelope, clearly marked "**SEALED BID.**" The vendor's name and return address **MUST** be on the front of the envelope. Failure to comply with this procedure may result in your bid being opened erroneously by the mail room and the bid being rejected from consideration.

PROPOSAL SUBMITTAL INFORMATION

REQUIRED NUMBER OF COPIES FOR PROJECT MANAGER 5	PROPOSAL/BID DUE DATE 6/10/08	TIME DUE 3:00 pm
--	----------------------------------	---------------------

PROPOSAL AND BID SHEET MAILING ADDRESSES

Mail the multiple proposal bundle to the MDOT Project Manager or Other indicated below.

☒ MDOT Project Manager ☐ MDOT Other

Suzette Peplinski, ITS Operations Engineer
1420 Front Ave., NW
Grand Rapids, MI 49504
616-451-8448

Mail one additional stapled copy of the proposal to the Lansing Office indicated below.

Lansing Regular Mail	OR	Lansing Overnight Mail
<input checked="" type="checkbox"/> Secretary, Contract Services Div - B470 Michigan Department of Transportation PO Box 30050 Lansing, MI 48909		Secretary, Contract Services Div - B470 Michigan Department of Transportation 425 W. Ottawa Lansing, MI 48933
<input type="checkbox"/> Contract Administrator/Selection Specialist Bureau of Transportation Planning B470 Michigan Department of Transportation PO Box 30050 Lansing, MI 48909		Contract Administrator/Selection Specialist Bureau of Transportation Planning B470 Michigan Department of Transportation 425 W. Ottawa Lansing, MI 48933

GENERAL INFORMATION

Any questions relative to the scope of services must be submitted by e-mail to the MDOT Project Manager. Questions must be received by the Project Manager at least four (4) working days prior to the due date and time specified above. All questions and answers will be placed on the MDOT website as soon as possible after receipt of the questions, and at least three (3) days prior to the RFP due date deadline. The names of vendors submitting questions will not be disclosed.

MDOT is an equal opportunity employer and MDOT DBE firms are encouraged to apply. The participating DBE firm, as currently certified by MDOT's Office of Equal Opportunity, shall be listed in the Proposal

MDOT FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION

5100D – Request for Proposal Cover Sheet
5100G – Certification of Availability of Key Personnel
5100I – Conflict of Interest Statement

(These forms are not included in the proposal maximum page count.)

Michigan Department of Transportation

SCOPE OF SERVICE FOR DESIGN SERVICES Intelligent Transportation Services

CONTROL SECTION: 84913

JOB NUMBER: 100611

PROJECT LOCATION:

West Michigan Transportation Management Center in Grand Rapids, Michigan

PROJECT DESCRIPTION: **Control Room Planning and Design**

Complete a design package for the interior of the West Michigan Transportation Management Center (WM TMC). The work includes an analysis of ITS requirements, an analysis of the space and functional needs, the development of ~~conceptual~~ alternatives for the **TMC operational systems control room layout**, and a final design package for the procurement, installation, and integration. Technical support will be required during the construction and integration phase of the project.

ANTICIPATED SERVICE START DATE: August 25, 2008

ANTICIPATED SERVICE COMPLETION DATE: January 29, 2010

PRIMARY PREQUALIFICATION CLASSIFICATION:

Intelligent Transportation Systems

SECONDARY PREQUALIFICATION CLASSIFICATION:

None

DBE REQUIREMENT: 0%

MDOT PROJECT ENGINEER MANAGER:

Suzette Peplinski, ITS Operations Engineer
Grand Region Office
1420 Front Ave., NW
Grand Rapids, MI 49504
Phone: 616-451-8448
Fax: 616-451-0707
E-mail: peplinskis@michigan.gov

BACKGROUND INFORMATION:

The Michigan Department of Transportation is currently working with URS Corp. Great Lakes, architect for the design of the building facility renovations for the new TMC Control Room and Equipment Room. They are under contract to the Department of Management and Budget to design the building renovations for the facility portion of the TMC and produce a package for letting.

The consultant will work closely with MDOT, relevant agencies, and their contracted vendors related to this project. A Project Team group will be formed that has the responsibility for providing operations and technical input and feedback throughout the project. This group is expected to include staff from MDOT, WMTMC Operations, Michigan Department of Information Technology (MDIT), and the City of Grand Rapids. Input may also be provided from other engineering consultants working on ITS projects for Grand Region/WMTMC.

REQUIRED MDOT GUIDELINES AND STANDARDS:

Work shall conform to current MDOT, FHWA, and AASHTO practices, guidelines, policies, and standards (i.e., Road Design Manual, Standard Plans, Drainage Manual, Roadside Design Guide, A Policy on Geometric Design of Highways and Streets, Michigan Manual of Uniform Traffic Control Devices, etc.). Work shall also conform to the applicable specifications and Federal guidelines with regard to placing underground and overhead communications devices, such as those specified herein.

Consultant is required to use MDOT's current version of Bentley MicroStation for CADD applications and Bentley GEOPAK for road design. Consultant shall comply with all MDOT CADD standards and file naming conventions.

CONSULTANT RESPONSIBILITIES:

Task 1: Project Management

This task includes the activities for the development of the project management plan, project status meetings, and project oversight.

Task 1.1: Project Management Plan

A Project Management Plan will be developed that includes a general discussion of the roles of each of the participants, schedule, quality control procedures, communication formats, and other management procedures.

Deliverables:

- *Project Management Plan*

Task 1.2: Project Status Meetings

The Consultant will attend monthly meetings with MDOT staff to discuss project status and progress. The consultant will provide meeting agendas and brief minutes of each meeting, including the participants, key discussions, and actions items established at each meeting.

Deliverables:

- *Project Status Meeting Agendas*
- *Project Status Meeting Minutes*

Task 1.3: Risk Analysis and Risk Management

As part of the planning and design of the TMC, a Risk Analysis/Risk Management Plan will be developed. This plan will document the potential project issues that may cause serious delays or cost overruns. This will be accomplished by gathering potential risks from MDOT and other system users as the Project Team progresses through each task. Associated with each documented risk will be a potential solution or resolution strategy that will be employed if the risk becomes a reality. The Risk Analysis Plan will cover the planning and design of the WMTMC only.

Deliverables:

- *Draft Risk Assessment/Risk Management Plan*
- *Final Risk Assessment/Risk Management Plan*

Task 1.4: Review and Coordination of DMB Facility Plans done by URS Corp.

One of the first tasks for this project will be for the Consultant to review the facility plans currently underway by URS Corp. to insure that the primary needs of the TMC are addressed as they impact the **equipment facility** design.

Deliverables:

- *Facility Design Review / Recommendations Memo*

Task 2: Planning for the West Michigan TMC

This task will focus on revising and updating the current WMTMC Concept of Operations provided by MDOT. This task also includes obtaining layouts, functional requirements, reviews of existing traffic operations centers for evaluation, and conducting system evaluation meetings.

Task 2.1: Update TMC Concept of Operations

The current WMTMC Concept of Operations document and other conceptual and strategic documents will be provided to the consultant by MDOT.

The TMC Concept of Operations update will be defined based on selected stakeholder input and functional requirements from existing documents, and will identify the primary control room functions of the WMTMC and how they will be accomplished. The consultant will review, revise, circulate for review, and revise content based on comments and information provided by MDOT and then publish the final TMC Concept of Operations update.

Deliverables:

- *Draft TMC Concepts of Operations Report for review*
- *One Stakeholder meeting for input on draft report*
- *Final updated TMC Concept of Operations*

Task 2.2: Review and Evaluate Existing Traffic Management Centers and Conduct System Evaluation Meetings

The Consultant will obtain conceptual layouts, system diagrams, system architecture, software system architecture and requirements, and functional requirements for various traffic management centers of similar size and scope as WMTMC, if available. This information will be compiled for evaluation and review for the various TMC components (i.e. high level requirements). **The Consultant will review high level functional requirements prepared by the DMB Facility designer for the control room layout.**

System evaluation meetings will be held with operators and supervisors from the related MDOT and City of Grand Rapids traffic management centers that connect or will connect with the WMTMC. These will include the existing WMTMC, the City of Grand Rapids Traffic Safety Operations Center, The Grand Rapids Police and Fire Dispatch Operations Center, the MDOT MITS Center, and the MDOT Lansing lab/operations center. The Consultant will provide an agenda prior to the system evaluation meeting. This meeting will include discussion on system architecture, system operations, operator interface, interface with communication systems, and various other items. These meeting will be documented for later use.

Deliverables:

- *Conceptual Plans and Functional Requirements for existing traffic management centers*
- *Evaluation for the existing traffic management centers*
- *Meeting minutes from evaluation and review meetings*
- *System evaluation meeting agendas*
- *System evaluation meeting documentation*

Task 3: Develop Functional Requirements for the West Michigan TMC

This task will focus on the development of the functional requirements **for the operations of the TMC Control and Equipment Rooms**, which are based on the Concept of Operations (ConOps) and Systems Evaluations as finalized in Task 2. **These will further refine the functional requirements prepared by the DMB Facility designer for the TMC, and provide detail related to the technical equipment, network, systems operations, and integration of the TMC.** The functional requirements are a statement of what capabilities the system must have in order to address the business needs of MDOT. The process of determining the functional requirements will proceed from the ConOps through high level requirements, detailed requirements, and final requirements review and concurrence by the Project Team.

Task 3.1: Develop **Technical Functional Requirements for the TMC**

Based on the goals and objectives as expressed by the Project Manager and the Project Team in the ConOps document, the **technical** functional requirements will be developed for WMTMC.

Task 3.1.1: Fact-Gathering

The functional requirements will state what functions ~~that~~ the WMTMC will perform, when it will perform them, how well it has to perform, what interfaces will be required, how the functions can be quantified, design constraints, and who are the users requiring the functionality (needed in the requirements review process). The process for gathering this information will involve the review of the concept of operations, gathering input at a project meeting, follow-up interviews with specific users as needed, and coordination with other transportation related projects that may affect the function of the WMTMC. A “kick-off” meeting will be held with MDOT Project Team and other selected users to discuss the project and process to be followed as well as gather feedback on the proposed concepts.

Deliverables:

- *Facilitation of Kick-Off Meeting and Telephone Interviews*
- *Minutes from Kick-Off Meeting and Telephone Interviews*

Task 3.1.2: Documentation of Functional Requirements

During the fact-gathering stage, information gathered in Task 3.1.1 will be filtered and the identified **technical** functional requirements documented in a complete, accurate, auditable, and clear manner.

Deliverables:

- *Documented Functional Requirements (Pre-Analysis)*

Task 3.1.3: Functional Requirements Analysis

This task will involve breaking down the **technical** functional requirements documented to the exact function the system must perform. The functional requirements will be analyzed for seven characteristics:

- Necessary – Don’t make something a requirement that isn’t really necessary
- Concise – Use the fewest words required
- Attainable – It should be possible to achieve the requirement
- Complete – A requirement statement should be complete and able to stand alone
- Consistent – No contradictions, no duplication or overlapping, consistent terminology
- Unambiguous – The language needs to be precise and not subject to differing interpretations
- Verifiable – The functional requirement should be measurable and stakeholders able to determine if they have been met

One Project Team meeting will be held to review the documented requirements and perform the analysis. Agreement on the preliminary **technical** functional requirements among the Project Team will be obtained prior to preparing the Draft Functional Requirements document.

Deliverables:

- *Functional Requirements Analysis Meeting Minutes*
- *Draft WMTMC Functional Requirements Document*

Task 3.1.4: Functional Requirements Review

This task will involve the review of the **technical** functional requirements with the Project Team to ensure that the requirements have been interpreted correctly. A requirements walk-through will be performed that involves going through each requirement one-by-one to clarify interpretation of that requirement. Any discrepancies will be addressed immediately and resolved during the meeting.

Deliverables:

- *Requirements Walk-Through Meeting Minutes*

Task 3.1.5: Functional Requirements Finalization

The final functional requirements will be documented and presented in a report to MDOT. These functional requirements will serve as the guiding principles for the design of the system as the project progresses. This will be the functional baseline.

Deliverables:

- *Final WMTMC Center Functional Requirements Document*

Task 4: Develop WMTMC Control Room Functional Design and System Integration Plan

This task will produce a design package for the ITS systems to be relocated within the MDOT Grand Region facility, a functional design for the overall West Michigan TMC System, and an integration plan for how to phase that deployment. Final Plan completion is targeted for 36 weeks after Consultant Notice to Proceed.

Task 4.1: Coordinate with Department of Management and Budget's (DMB's) Architect

DMB has selected an architect for the design of the WMTMC facility renovations. DMB's architect will design the facility, **control room layout and furniture**, and produce a package for letting. The Consultant team **for this contract** will produce a design package for the ITS systems to be relocated and incorporated within the new TMC Control Room and Equipment Room. The work includes an analysis of ITS requirements, an analysis of the space and functional needs, and the development of ~~conceptual~~ alternatives for the TMC interior ~~functional~~ **operational systems** layout.

Task 4.1.1: Meetings with the Architect

~~MDOT may request the~~ Consultant **will** attend meetings with the DMB architect.

Deliverables:

- *Meeting minutes from the meetings.*

Task 4.1.2: Conceptual Alternatives for Control Room and Equipment Room Operational Systems Layout

The DMB architect will provide documents showing the space available for the WMTMC, **and the control room layout**. The Consultant will provide an analysis of the **layout, and provide** ~~space and 2-3 recommended~~ alternatives for the interior ~~functional layout~~ **operational systems** of the TMC.

Deliverables:

- *ITS Space Availability Analysis*
- ~~Conceptual Alternatives for the TMC interior functional~~ **operational systems** layout.

Task 4.2: Develop WMTMC Design

This task will result in the development of construction documents for the ITS systems to be relocated and new equipment to be installed in the new TMC facility. A schematic design will be developed to document the preferred alternative. Upon approval of the schematic design, the Consultant team will prepare interim and final construction documents. The design will be coordinated with the DMB Architect's facility design. The Consultant will provide meeting minutes from all plan review meetings.

Task 4.2.1: Produce Schematic Design for WMTMC ITS

This task will produce a ~~schematic~~ **an operational** design for the WMTMC Control Room, Equipment Room, and ITS. The ~~schematic~~ **operational** design will consist of the video display system layout, console system layout, ~~modular layout,~~ operator workstations, and ITS equipment planned to be in the TMC. The ~~schematic~~ **operational** design will include an initial network layout for connecting all of the ITS equipment in the TMC. This task will also develop a requirements document for the new ITS equipment to be included in the design package. An outline for the ITS equipment specifications will also be developed.

Deliverables:

- *WMTMC ITS Schematic **Operational Systems** Design Document*

Task 4.2.2: Produce 50% Design Package for WMTMC

This task will consist of producing the 50% design package for the TMC. The 50% design will consist, at minimum, of the operational ~~systems room~~ **systems** layout, equipment room layout, rack layouts, and cabling and network diagrams. Draft ITS equipment specifications will also be developed. An initial estimate of construction cost will be prepared to confirm that the proposed project is within MDOT's budget objectives.

Deliverables:

- *50% Design Plans*
- *Draft ITS Equipment Specifications*
- *Preliminary Plan Review Meeting*

Task 4.2.3: Produce 95% Design Package for WMTMC ITS

This task will produce the 95% design package for the TMC. The 95% design plans will incorporate MDOT's review comments from the 50% design submittal. A final set of specifications will be included in the submittal. An updated estimate of probable cost will be provided.

Deliverables:

- *Substantially Complete Design Plans*
- *Final ITS Equipment Specifications*

- *Final Plan Review Meeting*

Task 4.2.4: Produce Construction Documents for WMTMC ITS

This task will finalize the construction documents for the WMTMC ITS. The construction documents will incorporate MDOT's review comments on the 95% design plans and final ITS equipment specifications. The Technical Specifications will be developed for inclusion with the construction documents. A final estimate of probable cost will be developed.

Deliverables:

- *Construction Documents for WMTMC ITS*
- *Technical Specifications for WMTMC ITS*

Task 4.3: Develop a Staging Plan Document

This task is to develop a staging plan for remaining operational in the existing control room, moving operations to the new control room and equipment room, with a minimum of disruption to operations. The plan will be developed and discussed along with the development of the design package.

Deliverables:

- *Draft Operational Staging Plan (at 95% Design package)*
- *Final Operational Staging Plan (at Final Construction Documents)*

Task 5: Technical Support during Construction

The designer will provide technical assistance during the installation and integration of the project, to assure that the project is being constructed according to the plans, specifications, and functionality requirements.

Task 5.1: Review of Documents, Inquiry Response, and System Testing

The designer will provide technical review during construction of the project, including:

- A. Review and recommendations regarding shop drawings and other submittals by the construction contractor.
- B. Inquiry response, integration oversight, and system testing and proofing.
- C. Oversee component and system acceptance tests and work with MDOT and its contractors to perform all tests.

PAYMENT SCHEDULE

Compensation for this Scope of Services shall be on an actual cost plus fixed fee basis.

CONSULTANT PAYMENT:

All invoices/bills for services must be directed to the Department and follow the 'then current' guidelines. The latest copy of the "Professional Engineering Service Reimbursement Guidelines for Bureau of Highways" is available on MDOT's Bulletin Board System. This document contains instructions and forms that must be followed and used for invoicing/billing; payment may be delayed or decreased if the instructions are not followed.

Payment to the Consultant for Services rendered shall not exceed the "Actual Cost Plus Fixed Fee, Not to Exceed Maximum Amount" unless an increase is approved in accordance with the contract with the Consultant. All invoices/bills must be submitted within 14 calendar days of the last date of services being performed for that invoice.

Direct expenses will not be paid in excess of that allowed by the Department for its own employees in accordance with the State of Michigan's Standardized Travel Regulations. Supporting documentation must be submitted, with the invoice/bill, for all billable expenses on the Project. The only hours that will be considered allowable charges for this contract are those that are directly attributable to the activities of this Project.

The use of overtime hours is not acceptable unless prior written approval is granted by the MDOT Region Engineer/Bureau Director and the MDOT Project Engineer Manager. Reimbursement for overtime hours that are allowed will be limited to time spent on this project in excess of forty hours per person per week. Any variations to this rule should be included in the priced proposal submitted by the Consultant and must have prior written approval by the MDOT Region Engineer/Bureau Director and the MDOT Project Engineer Manager.

The fixed fee for profit allowed for this project is 11.0% of the cost of direct labor and overhead.